



EPA Region 5 Records Ctr.



317164

July 10, 2007

Mr. Timothy Fischer  
U. S. EPA - Region 5  
77 West Jackson Boulevard (SR-6J)  
Chicago, Illinois 60604-3590

**Re: Sauget Area 2 Site – October 3, 2002 Unilateral Administrative Order  
(UAO) Groundwater Operable Unit  
Monthly Report; June 1 - June 30, 2007 Reporting Period**

Dear Mr. Fischer:

Attached is the Monthly Report for the Sauget Area 2 Site October 3, 2002 Unilateral Administrative Order (UAO) - Groundwater Operable Unit. This submittal is in fulfillment of the monthly reporting requirements of the UAO, Section XII, paragraph 62, Progress Reports. This report is for the period June 1 – June 30, 2007.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven D. Smith". The signature is fluid and cursive, with the first and last names being more prominent.

Steven D. Smith  
Project Coordinator

cc: Ken Bardo, - U. S. EPA  
Mayor Sauget - Sauget, IL  
Sandra Bron – IEPA  
Mike Coffey - USFWS  
Village of Sauget – c/o P. H. Weis & Associates (Attn: Brian Nelson)  
Mayor Frank Bergman – Cahokia  
L. Glen Kurowski - Monsanto  
Cathleen Bumb – Solutia  
Linda Tape - Husch & Eppenberger  
Richard Williams – Solutia

## **Sauget Area 2 Site - Sauget, Illinois**

### **October 3, 2002 UAO – Groundwater Operable Unit**

#### **Status Report**

**Date of Report:** July 10, 2007  
**Period Covered:** June 1 - June 30, 2007

#### **Work Performed During the Reporting Period**

##### **Site Work**

- Grass covering the site was mowed during the reporting period.

##### **Groundwater Treatment**

- As agreed upon with EPA, the Groundwater Migration Control System (GMCS) continues to be operated to maintain the total pumping rate equal to the computed inflow rate, based on the average of the gradients measured in the two existing pairs of piezometers located immediately upgradient of the Site R landfill. The system was operated in the above manner for the month of June,
- On May 27<sup>th</sup>, fluctuations and instabilities in the pumping rates were observed and it was noted that extraction well EW-3 appeared to be malfunctioning. Testing confirmed that the well was not capable of pumping more than 30 gpm. A new pump and motor were installed on May 29<sup>th</sup>. However, the problem persisted and the manufacturer of the variable frequency drive and control system was contacted to schedule a service call. The drive was checked on June 7<sup>th</sup> and was found to be problem free. Further testing of various system components was carried out through June 12<sup>th</sup>, when it was discovered that the connection between the remote actuator and the plug valve in the discharge line had failed, with the result that the valve remained closed at all times. The connection was repaired and the well was put back into service on June 12<sup>th</sup>.
- The water levels sensors in wells EW-1 and EW-2 malfunctioned on June 15<sup>th</sup>. The sensors were reset in the wells and recalibrated, but the sensor in EW-2 still malfunctioned. It was replaced with a new sensor on June 18<sup>th</sup>.

- Piezometer pair PZ-4 also began to malfunction on June 15<sup>th</sup>. The outside member of the pair was repaired and put back into service on June 19<sup>th</sup>, while the inner member was put back into service on June 21<sup>st</sup>. System performance was not affected by these malfunctions since neither of these piezometers is used to control flow rates.
- The signal from the American Bottoms bubbler gauge that records the river levels was lost on June 28<sup>th</sup>. The malfunction was caused by a blown fuse. A new fuse has been ordered and the signal will be restored as soon as it is available. Loss of this signal does not affect the system performance since the river level is not used to control flow rates.
- Validated analytical data from the first quarter 2007 groundwater samples obtained from the performance monitoring wells, as well as from the first semi annual sediment and surface water samples were submitted during the reporting period.
- Second quarter 2007 groundwater samples from the performance monitoring wells were collected.
- Water level and pumping data for the reporting period are attached.

### **Schedule**

The Agency is currently reviewing various submissions to determine if construction is complete.

### **Submittals During Reporting Period**

There were no submittals during the reporting period.

### **Work Scheduled for Next Reporting Period**

- Continue operating the extraction system to maintain the total pumping rate equal to the computed inflow rate
- Analyze second quarter 2007 groundwater samples from the performance monitoring wells.

## **PUMPING DATA**

# GROUNDWATER MIGRATION CONTROL SYSTEM

## JUNE DAILY AVERAGE PUMPING RATES AND WATER LEVELS

Date/Time		PUMPING RATE					SWL
		Computed Q	Total Q	EW-1 Q	EW-2 Q	EW-3 Q	
06/01/2007	Daily Average	3.28	14.69	0.00	14.69	0.00	398.36
06/02/2007	Daily Average	0.73	5.85	0.00	5.85	0.00	399.39
06/03/2007	Daily Average	0.00	0.00	0.00	0.00	0.00	400.14
06/04/2007	Daily Average	0.00	0.00	0.00	0.00	0.00	400.67
06/05/2007	Daily Average	0.00	0.00	0.00	0.00	0.00	401.61
06/06/2007	Daily Average	0.00	0.00	0.00	0.00	0.00	400.75
06/07/2007	Daily Average	1.49	5.70	0.98	4.71	0.00	398.91
06/08/2007	Daily Average	21.23	15.23	0.00	17.52	0.00	397.86
06/09/2007	Daily Average	30.15	32.47	0.00	32.47	0.00	397.25
06/10/2007	Daily Average	40.03	43.73	0.00	43.73	0.00	397.04
06/11/2007	Daily Average	47.49	42.55	0.00	42.55	0.00	397.15
06/12/2007	Daily Average	47.30	45.36	0.00	43.97	1.39	397.64
06/13/2007	Daily Average	27.50	28.87	0.00	28.87	0.00	397.45
06/14/2007	Daily Average	103.82	104.65	25.09	54.41	25.15	396.38
06/15/2007	Daily Average	236.67	230.40	113.51	0.00	116.90	395.04
06/16/2007	Daily Average	291.18	293.08	146.56	0.00	146.52	394.81
06/17/2007	Daily Average	234.88	234.09	117.05	0.00	117.04	394.98
06/18/2007	Daily Average	337.86	335.89	167.68	0.63	167.60	393.67
06/19/2007	Daily Average	417.35	399.31	208.14	0.43	208.08	392.97
06/20/2007	Daily Average	444.40	442.62	221.35	0.00	221.28	392.43
06/21/2007	Daily Average	478.33	478.90	239.45	0.00	239.45	391.88
06/22/2007	Daily Average	481.76	479.74	239.89	0.00	239.85	391.62
06/23/2007	Daily Average	495.97	499.74	249.92	0.00	249.83	391.62
06/24/2007	Daily Average	263.33	270.38	135.22	0.00	135.16	393.88
06/25/2007	Daily Average	115.78	114.79	40.16	34.40	40.23	394.95
06/26/2007	Daily Average	148.82	146.15	70.46	5.23	70.47	394.37
06/27/2007	Daily Average	275.32	275.44	136.50	2.56	136.37	393.72
06/28/2007	Daily Average	393.98	377.95	188.84	0.00	189.10	
06/29/2007	Daily Average	434.73	440.15	220.10	0.00	220.05	
06/30/2007	Daily Average	410.00	412.40	206.24	0.00	206.16	

# GROUNDWATER MIGRATION CONTROL SYSTEM

## JUNE DAILY AVERAGE PUMPING RATES AND WATER LEVELS

		GROUNDWATER LEVELS											
		PZ-5U	PZ-5D	Delta	PZ-6U	PZ-6D	Delta	PZ-7U	PZ-7D	Delta	PZ-8U	PZ-8D	Delta
06/01/2007	Daily Average	397.22	397.25	0.04	396.80	396.86	0.06	397.04	396.81	-0.23	396.89	396.91	0.02
06/02/2007	Daily Average	397.32	397.38	0.06	396.91	396.98	0.07	397.11	396.91	-0.20	396.99	397.28	0.28
06/03/2007	Daily Average	397.49	397.62	0.13	397.07	397.17	0.09	397.28	397.10	-0.19	397.20	397.67	0.47
06/04/2007	Daily Average	397.60	397.78	0.17	397.23	397.23	0.00	397.36	397.15	-0.21	397.27	397.83	0.55
06/05/2007	Daily Average	397.73	398.00	0.27	397.13	397.31	0.17	397.44	397.24	-0.20	397.42	398.13	0.72
06/06/2007	Daily Average	397.81	398.01	0.19	397.08	397.38	0.30	397.52	397.33	-0.19	397.48	398.07	0.59
06/07/2007	Daily Average	397.68	397.72	0.05	396.56	397.32	0.76	397.50	397.29	-0.22	397.35	397.63	0.28
06/08/2007	Daily Average	397.32	397.29	-0.03	396.94	396.99	-0.02	397.22	396.99	-0.23	397.04	397.14	0.10
06/09/2007	Daily Average	397.14	397.07	-0.07	396.82	396.80	-0.02	397.02	396.80	-0.23	396.84	396.86	0.02
06/10/2007	Daily Average	397.09	397.00	-0.09	396.81	396.77	-0.03	397.00	396.73	-0.27	396.77	396.77	0.00
06/11/2007	Daily Average	397.00	396.89	-0.11	396.71	396.64	-0.07	396.90	396.65	-0.24	396.71	396.71	0.00
06/12/2007	Daily Average	396.99	396.87	-0.12	396.66	396.58	-0.08	396.83	396.60	-0.23	396.66	396.71	0.05
06/13/2007	Daily Average	396.98	396.92	-0.06	396.66	396.63	-0.03	396.87	396.63	-0.24	396.68	396.73	0.06
06/14/2007	Daily Average	396.83	396.69	-0.13	396.46	396.54	0.08	396.76	396.49	-0.27	396.53	396.44	-0.10
06/15/2007	Daily Average	396.51	396.28	-0.23	396.25	396.21	-0.04	396.49	396.19	-0.31	396.21	395.95	-0.26
06/16/2007	Daily Average	396.29	395.97	-0.33	396.03	395.91	-0.12	396.26	395.92	-0.34	395.99	395.70	-0.30
06/17/2007	Daily Average	396.24	395.96	-0.27	395.98	395.90	-0.08	396.19	395.87	-0.32	395.92	395.69	-0.23
06/18/2007	Daily Average	396.00	395.69	-0.31	395.74	395.70	-0.04	396.03	395.67	-0.36	395.71	395.32	-0.39
06/19/2007	Daily Average	395.74	395.31	-0.43	395.51	395.43	-0.08	395.71	395.36	-0.34	395.39	394.94	-0.45
06/20/2007	Daily Average	395.48	395.06	-0.42	395.27	395.16	-0.11	395.49	395.12	-0.37	395.15	394.66	-0.50
06/21/2007	Daily Average	395.25	394.82	-0.43	395.07	394.94	-0.13	395.32	394.92	-0.40	394.94	394.39	-0.55
06/22/2007	Daily Average	395.09	394.66	-0.43	394.89	394.79	-0.10	395.16	394.77	-0.39	394.77	394.20	-0.56
06/23/2007	Daily Average	394.97	394.50	-0.47	394.58	394.62	0.04	395.02	394.61	-0.41	394.63	394.07	-0.56
06/24/2007	Daily Average	395.15	394.86	-0.29	394.82	394.77	-0.05	395.08	394.75	-0.33	394.79	394.52	-0.27
06/25/2007	Daily Average	395.32	395.16	-0.16	395.06	394.96	-0.10	395.22	394.93	-0.28	394.99	394.90	-0.09
06/26/2007	Daily Average	395.31	395.10	-0.21	395.06	394.96	-0.10	395.23	394.94	-0.29	394.95	394.83	-0.12
06/27/2007	Daily Average	395.17	394.86	-0.31	394.89	394.76	-0.13	395.08	394.75	-0.33	394.79	394.67	-0.12
06/28/2007	Daily Average	394.99	394.64	-0.35	394.77	394.70	-0.07	394.97	394.61	-0.36	394.64	394.11	-0.53
06/29/2007	Daily Average	394.77	394.34	-0.43	394.57	394.44	-0.14	394.79	394.39	-0.39	394.43	393.90	-0.52
06/30/2007	Daily Average	394.65	394.19	-0.46	394.46	394.36	-0.10	394.65	394.30	-0.35	394.29	393.87	-0.42

# GROUNDWATER MIGRATION CONTROL SYSTEM

## JUNE DAILY AVERAGE PUMPING RATES AND WATER LEVELS

Date/Time		GROUNDWATER LEVELS							
		PZ-1_OUTSI	PZ-1_INSIDE	PZ-2_OUTSI	PZ-2_INSIDE	PZ-3_OUTSI	PZ-3_INSIDE	PZ-4_OUTSI	PZ-4_INSIDE
		DE		DE		DE		DE	
06/01/2007	Daily Average	397.46	395.50	396.53	397.42	396.89	396.26	396.58	396.90
06/02/2007	Daily Average	398.02	395.61	397.45	397.53	397.78	396.37	397.13	397.05
06/03/2007	Daily Average	398.59	395.83	398.20	397.74	398.49	396.57	397.68	397.31
06/04/2007	Daily Average	398.87	395.93	398.67	397.84	398.96	396.69	397.96	397.38
06/05/2007	Daily Average	399.48	396.04	399.57	397.95	399.84	396.81	398.52	397.50
06/06/2007	Daily Average	399.09	396.12	398.84	398.03	399.13	396.92	398.19	397.56
06/07/2007	Daily Average	398.05	396.06	397.14	397.97	397.51	396.83	397.17	397.41
06/08/2007	Daily Average	397.29	395.71	396.20	397.63	396.58	396.43	396.49	397.04
06/09/2007	Daily Average	396.86	395.49	395.61	397.34	396.01	396.13	396.03	396.79
06/10/2007	Daily Average	396.66	395.38	395.40	397.28	395.83	396.09	395.88	396.70
06/11/2007	Daily Average	396.62	395.31	395.38	397.20	395.80	395.96	395.84	396.12
06/12/2007	Daily Average	396.83	395.26	395.75	397.15	396.14	395.91	396.01	390.27
06/13/2007	Daily Average	396.80	395.33	395.64	397.23	396.05	396.01	395.97	395.26
06/14/2007	Daily Average	396.16	395.05	394.51	396.94	395.06	395.73	395.50	395.77
06/15/2007	Daily Average	395.28	394.41	393.21	396.44	393.80	395.27		
06/16/2007	Daily Average	395.00	393.92	392.84	396.04	393.56	394.83		
06/17/2007	Daily Average	395.10	394.04	393.26	396.10	393.74	394.89		
06/18/2007	Daily Average	394.31	393.63	390.33	395.74	392.56	394.55		
06/19/2007	Daily Average	393.78	393.09	391.12	395.29	391.89	394.04	392.84	
06/20/2007	Daily Average	393.36	392.79	390.75	395.01	391.41	393.73	392.49	
06/21/2007	Daily Average	392.99	392.51	390.30	394.60	390.88	393.51	392.12	393.53
06/22/2007	Daily Average	392.79	392.35	389.92	394.58	390.62	393.35	391.93	393.18
06/23/2007	Daily Average	392.72	392.12	390.03	394.39	390.62	393.18	391.83	393.06
06/24/2007	Daily Average	393.94	392.70	392.05	394.86	392.62	393.62	392.95	393.69
06/25/2007	Daily Average	394.62	393.32	393.16	395.32	393.64	394.05	393.79	394.04
06/26/2007	Daily Average	394.34	393.29	392.59	395.30	393.13	394.10	393.48	394.32
06/27/2007	Daily Average	393.85	392.84	391.90	394.93	392.38	393.72	393.04	393.90
06/28/2007	Daily Average	393.26	392.46	390.90	394.61	391.51	393.42	392.50	393.51
06/29/2007	Daily Average	392.62	392.03	389.93	394.25	390.63	393.03	391.84	392.37
06/30/2007	Daily Average	392.38	391.98	389.66	394.18	390.36	392.96	391.58	392.33